

# A prospective study on the attitude of post graduates in general pediatrics toward pediatric oncology subspecialty as a career

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## ABSTRACT

**Objectives:** The health care scenario in India is experiencing an increase in the number of children affected with cancer and the number of pediatric oncologists available to treat these children are few and the awareness of childhood cancer is decimally low. Hence, the purpose of this study was to determine the attitude of post-graduate students of general pediatrics towards childhood cancer and to assess their interest in pursuing pediatric oncology as a specialty in their carrier. **Materials and Methods:** The study was conducted among 188 post-graduates hailing from various Medical colleges all over South India who were attending a 2 day workshop at Chennai. The survey was a 10 point questionnaire pertaining to their previous training, competence, interest toward the field of hematooncology. The data were analyzed by SPSS 18.V software. **Results:** Among the post-graduates, 74.7% of them reported that they did not have a pediatric oncology unit in their institution. 63.3% reported that they never been posted in pediatric oncology clinical postings before. 62% were not interested in pursuing pediatric oncology as a sub-specialty at all. 45.3% felt that pediatric oncology was too depressing to take as a specialty. 46.7% felt that late diagnosis and referral was the main factor which contributed to the failure of effective treatment of childhood cancers. 52.7% had never attended a class on pediatric oncology. 61.3% felt that they did not have sufficient knowledge to suspect and refer a child with cancer. 92% felt that there was a need to improve pediatric oncology teaching in their curriculum. 56.7% felt that the best way to imprint awareness on childhood malignancies was to improve pediatric oncology teaching in their medical curriculum. **Conclusion:** The results show that majority of post-graduates in pediatrics were not interested in pursuing pediatric oncology as a sub-specialty. The main reasons may be lack of specialized Pediatric oncology units in the majority of the medical institutions, lack of opportunity of these post-graduates to attend clinical postings and theory classes. They thus lack sufficient information in this field and hence do not want to take up a career in pediatric oncology.

**Key words:** Knowledge, pediatric oncology, teaching

## INTRODUCTION

Despite being a forerunner of growth in various fields, India has not taken strides in the field of pediatric oncology. There is a gross lack of facilities and the number of available trained pediatric oncologists in this field. This is despite the fact that childhood cancer is one of the most curable cancers and the survival rate for these children

is on the rise.<sup>[1]</sup> Though there are a number of Medical Institutions in our country, the awareness and interest of Medical Post Graduates in this field is very low, which could be attributed to the fact that very few institutions have a dedicated pediatric oncology unit and also due to the fact that there is a general lack of information about childhood cancer. What is surprising is that even though cancer is a widely spoken and debated topic among the medical fraternity, the lack of trained specialists points out that many post-graduates are unaware of the opportunities available in this field in terms of service, research and education. Hence, we conducted a survey to find the reason for the lack of interest among the post-graduates and their views regarding this field as it would help us to take the appropriate steps to kindle interest among the post-graduate students toward this sub-specialty.

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## MATERIALS AND METHODS

The survey was conducted in a 2 day workshop attended by post-graduates in pediatric medicine who came from all over India, though the majority of them were from South India. The post-graduates represented both Government and Private institutions. The workshop was attended by 188 pediatric post-graduates and the participation was voluntary. One hundred fifty of them participated in the survey and gave their inputs. The survey was a 10 point questionnaire pertaining to their previous training, competence, interest toward the field of hematooncology (Annexure 1). The data were analyzed by SPSS 18.V software.

## RESULTS

Of the 188 residents, 150 (83%) volunteered for the study. Seventy-eight (52%) of the respondents were males and 72 (48%) were females. 30.7% were from Diploma in Child Health and 24% from Diploma in National Board courses and 45.3% from MD courses. 46.7% of the participants were from Government Institutions.

Among the post-graduates, 112 (75%) of the individuals reported that they do not have a pediatric oncology unit in their institution. 96 (64.3%) of the post-graduates had never attended pediatric oncology postings during their training program.

About 79 (52.7%) of the individuals have never attended a lecture class on pediatric oncology, and of the 71 who attended lectures a majority of 50 (70.4%) have attended more than seven lectures on pediatric oncology.

Regarding the question as to which factor contributed the most to the failure of effective treatment of childhood cancer, 70 (46.7%) post-graduates have replied that late diagnosis and referral was the leading cause, while 42 (28%) of them have replied that the huge cost of treatment was the main factor leading to failure. Eleven (7.3%) of them felt that the less availability of trained personnel was the major determinant leading to the failure. Eleven (7.3%) were of the opinion that unwillingness to undergo treatment due to misconception and social stigma was another cause. twelve (8%) individuals felt that the main cause for failure was the lack of treatment availability in the country, while surprisingly 4 (2.7%) post-graduates have replied that genetic variability also played a role in the failure of treatment.

The choice of pursuing pediatric oncology as a sub-specialty was met with a majority of 94 (63%) post-graduates replying that they were not interested in pursuing

it as a sub-specialty, even of those who were interested many of them remained apprehensive towards the field of pediatric oncology.

The main reason for the lack of interest in pediatric oncology as a sub-specialty turned out to be an interesting question with an overwhelming majority of 68 (45.3%) saying that it was too depressing to be taken as a career, while 50 (33.3%) have replied that they did not want to pursue the field as it had an unpredictable outcome among the patients. Nineteen (12.7%) individuals have said that they did not possess adequate knowledge regarding this field, which acted as a hurdle for them to take up this field. Seven (4.7%) felt that insufficient financial compensation led to their lack of interest, while six (4%) were not interested in this field because of the huge workload involved.

Among the post-graduates, 92 (61.3%) have agreed that they do not possess sufficient information in pediatric oncology to suspect and refer a child during their practice. This is supported with an overwhelming majority of 138 (92%) replying that there was a need to improve the teaching of pediatric oncology in their curriculum.

Regarding the questions to the best way to increase the awareness of childhood cancer in our society, 85 (56.7%) felt that improving pediatric oncology education in the medical curriculum was the best way to imprint awareness on childhood malignancies. Thirty-four (22.7%) have replied that mass media creating awareness among the public was the best tool in raising awareness. Twenty (13.3%) are of the opinion that conducting seminars and lectures was the best way forward. Eleven (7.3%) felt that launching national cancer control programs in children by the Government health officials would be the best way to imprint awareness.

Regarding the best way to support pediatric oncology patients, 48 (32%) of the post-graduates wanted to donate blood as a way of support. Forty (26.7%) replied that they will function as a volunteer. Interestingly, 35 (23.3%) were ready to raise funds for these patients. Twenty-seven (18%) have said that they would take up a carrier in pediatric oncology and show their support.

## DISCUSSION

The number of children afflicted with cancer is on the rise in developing countries. However, in developing countries, a large number of children fail to get appropriate treatment and hence, at least 40% of the diagnosed children are lost.<sup>[2]</sup> This is due to the lack of initiation of specific

therapy at the appropriate time, which in turn emphasizes the importance for the establishment of basic oncology services in all peripheral medical centers. Unless there are trained pediatric oncologists available with the established pediatric oncology units, the treatment of these children will remain inadequate and incomplete obviously.

Currently in our health care system, adult oncologists and pediatricians play a major role in the recognition, diagnosis, referral and treatment of all childhood cancers. The number of available trained pediatric oncologists for a country like India, wherein, there are 40,000 (approximately) new cases of pediatric cancer are diagnosed each year, with 70% of them in the advanced stages are found to be very less. There are approximately only 55 practicing pediatric oncologists in our country.<sup>[3]</sup> This forms the core of the existing problem because the lack of trained pediatric oncologists is the main barrier to the delivery of appropriate care. Hence, in our country it becomes appropriate to find out the cause for the lack of interest of the pediatric post-graduates towards taking up a career in pediatric oncology.

Hence, we conducted a survey of the pediatric post-graduates to assess the cause of the lack of interest among the post-graduates and their views regarding this field as it would help us to take the appropriate steps to kindle interest among the students towards this sub-specialty. This two day workshop was a refresher course, for the preparation of final year exams for pediatric post-graduates of various courses like MD, Diploma in Child Health, Diploma in National Board, from all over India. These post-graduates once they complete their exams would be the future pediatric consultants in their respective region. So, the time of conductance of the study was ideal, to assess their reason for not choosing a career in pediatric oncology.

This study unambiguously shows that the post-graduates felt that they did not have adequate information on pediatric oncology to suspect and refer a child appropriately during their practice. Studies have shown that post-graduate or residents are likely to be interested in a sub specialty, if they have had previous exposure in terms of formal training or have assisted in research in the particular field during their course of study.<sup>[4]</sup> The welcoming finding was that all of them felt that there was a need to improve pediatric oncology teaching in their curriculum. Thus, they all agree that having sufficient information in this sub specialty would improve their chances of opting for it as a career.

The study also shows that an overwhelming majority of the post-graduates was not at all interested in taking up pediatric oncology as a career, though the reasons for this answer varies among them. Surveys of pediatric training programs have shown trend toward residents/

post-graduates choosing careers in general pediatrics rather than in sub specialties.<sup>[5]</sup> Post-graduates once again feel that inadequate knowledge is a deterrent toward their interest in this sub specialty. The other factors replied add to the complexity faced by the post-graduates toward opting a particular field today. Lifestyle issues like finances played a role in their choice. They are more likely to take up a field which has adequate pay than specialties that don't have adequate financial compensation. Heavy workload increased their firmness in opting to not take up this field. This is supported by a study, which shows that excessive workload leads to inefficient work among the residents and hence they are more likely to opt for a career in general pediatrics.<sup>[6]</sup> Interestingly, many of the post-graduates felt pediatric oncology to be a depressing field.

Studies have shown that great strides have been taken in the diagnosis, treatment and the increase in the survival rate of children with cancer only because of establishment of specialized centers with research infrastructure.<sup>[7]</sup> Hence, it is appalling to see that a majority of the post-graduates are in institutions, which do not have a specialized unit for pediatric oncology. Hence, the post-graduates would have never attended clinical postings in this sub specialty, thereby making them uninterested towards a specialty in which they have no hands on experience. This contributes to the lack of trained personnel who would have diagnosed and treated a child as early as possible. This is supported by the post-graduates saying that late diagnosis was the main cause for failure of effective treatment of cancer.

A majority have agreed upon the fact that improving pediatric oncology education in the medical curriculum was the best possible way to imprint awareness on childhood malignancies. This in fact points to the fact that any delay in diagnosing cancer in a child is mostly due to a lack of knowledge for early diagnosis/pick up by the physician.<sup>[8]</sup> The media plays a central role in creating awareness on any issue in our country. Hence, it is appropriate that many post-graduates felt that the media was the answer to increase awareness. Quite a few felt that conducting seminars will help the general practitioners, while the rest that the government shares the responsibility of creating awareness by implementing national cancer control programs.

The survival rate of children affected with hematologic cancers has increased after the induction of hematotherapy in oncology.<sup>[9]</sup> Hence, the importance of blood donation is a known factor among the post-graduates. They appropriately chose blood donation as the way by which they would like to support the pediatric oncology patients. Many were willing to volunteer in the department. The importance of funds to support the treatment of these children is next on the

agenda in the minds of the post-graduates. Although the post-graduates were willing to support children with cancer in the above-mentioned ways, they were still reluctant to take up pediatric oncology as a career.

All of the post-graduates were aware of the causes which lead to the failure of effective treatment of cancer in our country. They replied that late diagnosis and referral by the physician was the leading cause, while the huge cost of treatment remained as the next immediate response. Many of them agreed that the lack of trained personnel in pediatric oncology and the general lack of availability of treatment centers in our country also contributed to the failure. Misconception and social stigma toward childhood cancer is huge among the common man and it paves the way for lack of effective treatment. Surprisingly, a few of the post-graduates added that genetic variability among the children affected with cancer also played a role in the failure. It is increasingly recognized that many complications result from complex interactions between therapeutic exposures and genetic susceptibility.<sup>[10]</sup>

## CONCLUSION

The study concludes that there is a definite lack of interest among the post-graduates in taking up pediatric oncology as a career. This is because of a lack of specialized units in the majority of the medical institutions, whereby a majority of the post-graduates do not get an opportunity to attend clinical postings and hence do not take up an active interest to attend lectures on this topic. They thus lack sufficient information in this field and hence do not want to take up a career in pediatric oncology. This can be remedied by improving the teaching of pediatric oncology in their curriculum and by making sure that pediatric oncology postings is made mandatory for all post-graduates who have a pediatric oncology unit in their institution and if a

unit is not available they must be made to attend postings in a nearby pediatric oncology unit.

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